CLAIM SET AS AMENDED

1. (original) An apparatus for detecting fatigue and doze by voice, comprising a controller capable of performing the following operations:

calculating Lyapunov exponents by chaos analysis of digital data of voices; and

judging a fatigue level and/or a dozing state by comparing the calculated Lyapunov exponents of voices uttered at different points of time.

2. (original) The apparatus for detecting fatigue and doze by voice as set forth in claim 1, further comprising:

a microphone for inputting a voice as a sound signal and

an analog/digital converting device for converting the sound signal inputted to said microphone into digital data.

3. (original) The apparatus for detecting fatigue and doze by voice as set forth in claim 1, wherein

the calculation of the Lyapunov exponents by said controller is performed by chaos analysis of digital data of sound signals recorded on a recording medium.

4. (original) The apparatus for detecting fatigue and doze by voice as set forth in claim 1, wherein

said controller is further capable of performing the operation of removing a voiceless part from the digital data prior to the calculation of the Lyapunov exponents.

5. (currently amended) The apparatus for detecting fatigue and doze by voice as set forth in claim 4, wherein

said controller is further capable of performing the operation of generating digital data of a predetermined length by data based on said digital data, in the case where a data length of said digital data, after removing the voiceless part, is less than the predetermined length, prior to the calculation of the Lyapunov exponents.

6. (currently amended) The apparatus for detecting fatigue and doze by voice as set forth in claim 1, further comprising a storing device for storing calculation results obtained by the operation of calculating the Lyapunov exponents, and wherein

said controller is coupled to said storing device and further capable of performing the operation of comparing the Lyapunov exponents of voices uttered at different points of time[[,]] based on the calculation results, which were obtained in advance by the

operation of calculating the Lyapunov exponents and are stored in said storing device, during the judging operation.

7.   (original) A computer readable recording medium on which a program for causing a computer to detect a fatigue level and/or a dozing state by analysis of voices uttered at different points of time is recorded, including:

program code means for causing a computer to calculate Lyapunov exponents by chaos analysis of digital data of voices; and

program code means for causing a computer to judge a fatigue level and/or a dozing state by comparing the Lyapunov exponents of the voices uttered at different points of time.

8. (original) The recording medium as set forth in claim 7, further including program code means for causing a computer to remove a voiceless part from loaded digital data.

9. (currently amended) The recording medium as set forth in claim 8, further including program code means for causing a computer to generate digital data of a predetermined length from data based on said loaded digital data, in the case where a data length, after removing the voiceless part from said loaded digital data, is less than the predetermined length.

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10. (original) The recording medium as set forth in claim 7, further including:

program code means for causing a computer to store calculation results of the Lyapunov exponents;

program code means for causing a computer to read the stored Lyapunov exponents; and

program code means for causing a computer to compare the read Lyapunov exponents of voices uttered at different points of time.

11. (currently amended) A computer readable recording medium on which a program for causing a computer to detect a fatigue level and/or a dozing state by analysis of voices uttered at different points of time is recorded, including:

program code means for causing a computer to remove a voiceless part from digital data of voices;

program code means for causing a computer to generate digital data of a predetermined length from data based on loaded digital data, in the case where a data length after removing a voiceless part from said loaded digital data is less than the predetermined length[[.]];

program code means for causing a computer to give the loaded data to a chaos analyzing process for calculating Lyapunov exponents by chaos analysis;

program code means for causing a computer to store calculation results of the Lyapunov exponents calculated by said chaos analyzing process;

program code means for causing a computer to read the stored Lyapunov exponents; and

program code means for causing the computer to judge a fatigue level and/or a dozing state by comparing the read Lyapunov exponents of voices uttered at different points of time.

12. (new) A method for detecting fatigue and doze by voice, the method comprising:

receiving voice data onto a recordable medium;

calculating Lyapunov exponents by chaos analysis of the voice data; and

judging a fatigue level and/or a dozing state by comparing the calculated Lyapunov exponents of voices uttered at different points of time.